APPENDIX A

Field Data

March 2003 Annual Groundwater Monitoring Field Data Report

The Boeing Realty Corporation Former C-6 Facility Torrance, California

Prepared by: **Tait Environmental Management, Inc.**

May 5, 2003

May 5, 2003

Ms. Stephanie M. Sibbett Boeing Realty Corporation 3855 Lakewood Boulevard Building 1A, MC D001-0097 Long Beach, CA 90846

Subject: Field Data Report for Annual Gauging and Sampling (March 2003) at the Boeing Realty Corporation, Former C-6 Facility, Torrance, California

Dear Ms. Sibbett:

This report is prepared to summarize and present the field data collected during the March 2003 Annual groundwater sampling and gauging activities conducted March 25-28, 2003 at the Boeing Realty Corporation (BRC), Former C-6 Facility, Torrance, California (Site). The groundwater gauging and sampling activities were performed in accordance with the following:

- Groundwater Monitoring Work Plan 2003 by Haley & Aldrich, Inc., dated December 9, 2002 (File No. 28882-002).
- Statement of Work for Evaluating of Natural Attenuation by Exponent prepared for Ogden Environmental and Energy Services Co., dated January 10, 2001.
- Standard Operating Procedures for Measuring Natural Attenuation Parameters by England Geosystems and Haley & Aldrich, dated January 9, 2001.
- Standard Operating Procedures, Groundwater Gauging and Sampling by Tait Environmental Management, Inc., dated September 9, 2002.

The following is a brief summary of our field activities and observations:

- A total of 20 monitoring wells were gauged on March 25, 2003. Three (3) wells (WCC_4S, WCC_12S, and XMW_09) could not be gauged due to accessibility issues (See Groundwater Gauging Table, Appendix A).
- A total of 20 monitoring wells were purged and sampled between March 25-28, 2003.
 Three (3) of the 20 monitoring wells (TMW-6, TMW-11, & XMW-19) were purged and sampled for natural attenuation parameters.



- Three (3) wells could not be sampled due to accessibility issues. Monitoring well WCC_12S had been buried more than 4 feet below ground surface. Monitoring well WCC_4S was not sampled as the well was covered with trash/refuse and the entrance gate had been damaged and was in a closed position, not allowing access with the equipment. Monitoring well WCC_7S, which is located approximately 150 feet between WCC_12S and WCC_4S was sampled in order to obtain data for that area of the Site. Monitoring well XMW_09 is an off-site well not owned by BRC. This well was not sampled, as it had been paved over during previous construction activities in that area.
- A total of twenty (20) 55-gallon drums were filled with decontamination and purged groundwater and were labeled per the Haley & Aldrich IDW numbering scheme. The wells were left adjacent to each well and then later relocated to Lot 8.

Please call us if you have any questions or comments at (714) 560-8200. TEM is pleased to be of continued service to Boeing Realty Corporation.

Very Truly Yours,

Tait Environmental Management, Inc.

Scott Ek

Project Geologist

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Attachments:

Appendix A: Well Gauging Data Sheets & Groundwater Sampling Data Sheets

Appendix B: Daily Field Reports

Appendix C: Instrument Calibration Sheets, QA/QC Sample Identification Forms, and

Investigation Derived Waste Inventory Records

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March 2003 Annual Groundwater Monitoring Event Groundwater Gauging Table

Boeing Realty Corporation Former C-6 Facility Torrance, California

Well ID	Date	Time	Diameter	Measurement Point	Depth to Water	Total Depth	Comments
BL-03	03/24/2003	9:13	2	TOC-Notch	70.35	80.93	Good condition, tubing in well, soft bottom.
DAC-P1	03/24/2003	10:10	4	TOC-Redmark	65.58	90.50	Good condition, tubing in well, soft bottom.
TMW-01	03/24/2003	10:40	2	TOC-Blackmark	69.84	84.61	Good condition, soft bottom.
TMW-02	03/25/2003	10:35	2	TOC-Bluemark	69.79	85.05	Very muddy bottom.
TMW-04	03/24/2003	8:46	2	TOC-Bluemark	66.27	80.23	Good condition, tubing in well, semi-soft bottom.
TMW-05	03/24/2003	9:00	2	TOC-Bluemark	67.57	83.09	Area surrounding well overgrown with shrubs, tubing in well, very soft bottom.
TMW-06	03/24/2003	8:53	2	TOC-Bluemark	70.67	85.80	Tubing in well, good condition; soft bottom.
TMW-07	03/24/2003	10:20	2	TOC-Blackmark	66.24	83.59	Good condition, soft bottom.
TMW-08	03/24/2003	10:25	2	TOC-Blackmark	67.69	82.53	Good condition, soft bottom.
TMW-09	03/24/2003	10:44	2	TOC-Blackmark	66.56	80.19	Above-ground well casing loose. Soft well bottom.
TMW-10	03/24/2003	9:22	2	TOC-Blackmark	61.52	77.90	Well box flooded, both bolts missing. Soft bottom.
TMW-11	03/24/2003	8:55	2	TOC-Blackmark	61.97	78.00	Good; Soft well bottom.
TMW-14	03/24/2003	9:55	2	TOC-Blackmark	72.61	87.70	Monument casing, no well cap; soft well bottom.



March 2003 Annual Groundwater Monitoring Event Groundwater Gauging Table

Boeing Realty Corporation Former C-6 Facility Torrance, California

Well ID	Date	Time	Diameter	Measurement Point	Depth to Water	Total Depth	Comments
TMW-15	03/24/2003	10:02	2	TOC-Blackmark	68.90	87.26	Monument casing, good condition; soft bottom.
WCC-12S	03/25/2003		4				Well not accessible. Wellhead is burried >4 feet below ground surface - Inacessible.
wcc-3s	03/25/2003	9:17	4	TOC-Blackmark	64.46	88.78	Very muddy bottom.
WCC-4S	03/24/2003		4				Well not accessible. Wellhead is covered with heavy refuse/trash - Inacessible.
WCC-5S	03/24/2003	10:15	4	TOC-Blackmark	62.13	89.86	Well overgrown with shrubery, soft bottom.
wcc-6s	03/25/2003	10:25	4	TOC-Blackmark	64.58	88.14	Very muddy bottom.
WCC-7S	03/24/2003	9:24	4	TOC-Blackmark	63.72	90.34	Good condition, soft bottom.
wcc-9s	03/25/2003	10:15	4	TOC-Blackmark	60.51	88.15	Very muddy bottom.
XMW-09	03/24/2003		4				Well paved over during construction - Inaccassible.
XMW-19	03/24/2003	NM	4	TOC-Blackmark	60.87	77.33	Good; Soft well bottom.

NOTES:

--- = Not Measured or No Information Available.

Depth to Water and Total Depth are in feet below measurement point.

Diameter in inches.

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Groundwater Sampling Data Sheet

	me: Di	₹С, г	ormer v	2-6 Fac	HITY (IVIE	rch 2003)			Date	: 03/26/03					
Project No.	: EM-2	2303								ared By: 1					
Well Identif									Pum	Intake D	epth (f	-bmp)	· ~78		* ** *** · · · · · · · · · · · · · · ·
Measureme	ent Poi	nt De	escript	ion: T	op of Ca	sing, Blac	kmark								
Depth to LNAPL (f bmp)	F#_		•	Static	i i	N ell Total (ft-bn	-	1 V	/ater Column Height (ft)	LNA	APL Thic	kness	i	(1) Casing ne (gallons)	Three (3) Casing Volumes (gallons
ND			68.9	91		87.3	9		18.48		ND			3	9
147-11-01-		<i>(</i> :)			Gallo	ns/Foot		Field	d Equipment:	Horiba	U-22, S	olinst \	Vater Leve	l Meter	
Well Dia	meter	(IN)	0	.75	2	4	6	Purç	ge Method:	2-Inch	Diamete	er Grun	dfos Pump	with Dedicate	ed Tubing
0.75	4	6	0	.02	0.16	0.65	1.47	Well	l Condition:						
Time	Casing Volume				low Rate (gpm)	Water L (ft-bm		Ph	Temperature (°C)	Turbidity (NTU)	Condu (mS/		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
11:06	0.5		1.5		0.4	74.1	1	7.11	23.77	>990	0.9)1	5.75	+16	Very Silty
11:08	1		3		0.75	74.2	5	7.15	23.82	800	0.9	5	5.31	+19	Silty
11:10	1.5		4.5		0.75	74.0	0	7.16	24.06	540	1.1	0	4.63	+24	Slightly Silty
11:13	2		6		0.5	73.7	1	7.18	24.17	470	1.2	20	4.39	+17	Slightly Silty
11:16	2.5		7.5		0.5	73.5	3	7.20	24.24	300	1.2	23	4.33	+6	Clear
11:19	3		9		0.5	73.3	0	7.22	24.32	48	1.1	7	4.34	+7	Clear
Purge Start Time	ge En Time	d Av	/erage F (gpm)	I	otal Gallons Purged	³ V	al Casing olumes Purged	80% Recovery Water Leve Depth	Water at Sar Time (f	npling	Colle	nple ection me	Sampl	e Identification	
11:02	1	1:19		0.5		9		3	72.61	72.	.61	11	:25	TMW_15_	WG032603_0001

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid



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Groundwater Sampling Data Sheet

Project Na	me: B	RC	, Forr	ner C-6	Facility (Mar	ch 2003)				Da	ate: 0	3/26/03	}				
Project No	.: EM-	230	3								Pr	repare	ed By:	NC/CC			7.00	
Well Ident	ificatio	n:	TMV	/_14							Pu	ımp lı	ntake D	epth (t-bmp)	~82		
Measurem	ent Po	int	Desc	ription	Top of	Cas	ing, Blac	kmarl	k									
Depth (LNAPL (bmp)	(ft-		-	h to Sta evel (fi		W	ell Tota (ft-bn	•	th		ater Colu Height (fi		LNA	NPL Thi	ckness	· • • • • • • • • • • • • • • • • • •	(1) Casing le (gallons)	Three (3) Casing Volumes (gallons
ND				72.56			87.6	8			15.12			ND			2.5	7.5
Well Dia	amatar	/in	,		Gal	lons	/Foot			Field	Equipme	nt:	Horiba	U-22, \$	Solinst V	Vater Leve	Meter	
Well Die	annete:	(***	,	0.75	2		4	6		Purge	Method	-	2-Inch	Diamet	er Grun	dfos Pump	with Dedicate	ed Tubing
0.75 2	4		6	0.02	0.16		0.65	1.4	17	Well (Condition	1:						
Time	Casing Volume Purged Fig.				Flow Ra		Water L (ft-bm		Pl	h 7	Femperatur (°C)		urbidity NTU)	Condu (mS		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
10:00	0.5		•	1.25	0.6		72.9	4	6.9	97	23.91		880	3.	70	6.37	+22	Very Silty
10:02	1			2.5	0.6		72.9	5	6.9	94	24.02		740	3.0	59	5.95	+26	Silty
10:04	1.5		3	3.75	0.6		72.8	8	6.9	94	24.15		330	3.0	30	5.60	+37	Clear
10:06	2			5	0.6		72.8	9	6.9) 5	24.50		220	3.4	48	5.44	+49	Clear
10:08							73.1	0	6.9	96	24.01		95	3.5	51	5.66	+59	Clear
10:09	3			7.5	1.25		73.1	3	6.9	7	23.81		38	3.4	40	5.57	+64	Clear
Purge Start Time							al Gallons Purged		otal C Volun Purg	1	80% Recove Water Le Depth	ery evel	Water at San Time (fi	npling	San Colle Tir	ction	Sample	e Identification
9:58	1	0:09	9	0.0	88		7.5		3		75.58	3	73.	13	10:	12	TMW_14 \	NG032603 0001
Notes:	<u> </u>			h.,			·											-

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid

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Groundwater Sampling Data Sheet

Project Na	me: B	RC,	Forr	ner C-6	Facility (Mar	ch 2003)				Da	te: 03	3/26/03	; 				
Project No	.: EM-2	230	3								Pro	epare	d By:	NC/CC				
Well Ident											Pu	mp In	take D	epth (f	t-bmp)	: ~72		
Measurem	ent Poi	nt l	Desc	ription:	Top of	Cas	ing, Blac	kmarl	k									
Depth (LNAPL (bmp)	ft-		-	h to Sta .evel (ft		W	ell Total (ft-bm	-	th		ater Colui Height (ft		LNA	APL Thi (ft)			1) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND				61.91			77.4	2			15.51			ND			2.5	7.5
Well Dia		/i\			Gai	lons	s/Foot			Field	l Equipme	nt:	Horiba	U-22, S	Solinst \	Vater Level	Meter	
wen bi	ameter	(m)		0.75	2		4	6	,	Purg	e Method:		2-Inch	Diamet	er Grun	dfos Pump	with Dedicate	ed Tubing
0.75	4		6	0.02	0.16		0.65	1.4	17	Well	Condition	:	Good (Conditio	n, Solid	Bottom		
Time	Casing Volume FI					ate)	Water Le		만	٦	Temperature (°C)	1	rbidity NTU)	Condu (mS	- 1	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
9:20	0.5			1.25	0.6		62.26	3	7.0	7	23.68	>	990	1.0	36	6.15	+28	Very Silty
9:21	1			2.5	1.25	;	62.27	7	7.0)5	23.69		780	1.0	66	5.51	+34	Silty
9:22	1.5		,	3.75	1.25	5	62.28	3	7.0)5	23.74	-	420	1.0	66	5.04	+41	Clear
9:24	2			5	0.6		62.28	3	7.0	5	23.73		210	1.0	35	4.81	+46	Clear
9:25							62.28	3	7.0)5	23.71		87	1.0	35	4.64	+52	Clear
9:26	3			7.5	1.25	5	62.3	1	7.0)5	23.72		39	1.0	65	4.46	+54	Clear
Purge Start Time					·		al Gallons Purged		otal Ca Volum Purg	nes	80% Recove Water Le Depth	ery evel	Water at San Time (f	npling	Colle	nple ection ne	Sampl	e Identification
9:18	9	9:26		0	.9		7.5		3		65.01		62.	.31	9:	30	TMW_11_	WG032603_0001
Notes:	- L																	

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid



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Groundwater Sampling Data Sheet

Project Nai			rmer C-6	Facility (M	arch 200	3)				03/26/03					
Project No.						· ··•			Prepa	ared By:	NC/CC				
Well Identif			···-	· · · · · · · · · · · · · · · · · · ·		•			Pum	Intake l	Depth (f	t-bmp)	~71		
Measureme	ent Poi	nt Des	scription	Top of C	asing, Bl	ackma	rk								
Depth to LNAPL (1 bmp)	ft-	•	pth to Sta Level (f		Well To	tal De _l omp)	oth		ater Column Height (ft)	LNA	APL Thi	ckness	1	l) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND			61.47		78	.95			17.48		ND			3	9
Well Dia	motor ('im\		Gallo	ns/Foot			Field	Equipment:	Horiba	u-22, S	Solinst \	Vater Level	Meter	
Well bla	meter (, iii <i>j</i>	0.75	2	4		6	Purge	Method:	2-Inch	Diamet	er Grun	dfos Pump v	with Dedicate	ed Tubing
0.75 2	4	0.16	0.65	1.	.47	Well (Condition:	Good	Conditio	n, Solid	Bottom				
Time	Casing Volume Flox				-	Level	PI	h 7	remperature (°C)	Turbidity (NTU)	Condu (mS/	- 1	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
8:25	0.5		1.5	0.75	61	.92	6.5	55	23.87	680	1.5	52	6.25	+26	Silty, No Odor
8:27	1		3	0.75	61	.93	6.7	74	23.59	340	1.5	54	5.62	+33	Mostly Clear
8:29	1.5		4.5	0.75	61	.97	6.8	36	23.53	160	1.5	55	5.41	+42	Clear
8:31	2		6	0.75	61	.97	6.9	95	23.66	82	1.5	56	5.38	+48	Clear
8:32						.97	7.0)3	23.55	46	1.5	57	5.36	+61	Clear
8:34	3 9 0				61	.98	7.0)8	23.54	22	1.5	57	5.34	+66	Clear
Purge Start Time		e End me		ge Flow	Fotal Gallo Purged	ns T	otal C Volun Purg	nes	80% Recovery Water Level Depth	at Sa	Level mpling ft-bmp)	Sar Colle Tir	ction	Sampl	e Identification
8:23	8:	34	0	.8	9		3		64.97	61	.98	8:	40	TMW 10	WG032603 0001

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid

Projec	t Na	me: E	RC,	Forn	ner C-6 I	Facility (Mar	ch 2003)				Date:	03/25	/03			.			
Projec	t No	.: EM	2303	3								Prepa	red By	y: N	IC/CC					
Nell Id	lenti	fication	on: \	WCC	_6S							Pump	Intak	e De	epth (ft	-bmp):	~75		**	
Measu	rem	ent Po	int I	Desc	ription:	Top of	Cas	ing, Blac	kmark											
LNA	pth t PL (mp)			-	h to Sta .evel (ft		W	ell Total (ft-bn	-			Column ht (ft)	L	.NAI	PL Thic (ft)	kness	ì	(1) C me (ga	asing allons)	Three (3) Casing Volumes (gallons
	ND				64.88			88.0	0		23	.12			ND			15		45
Wal	/ell Diameter (in)						lons	s/Foot		F	ield Equ	ipment:	Hor	iba	U-22, S	olinst V	Vater Lev	el Met	er	
Wei	0.75					2		4	6	F	Purge Me	thod:	2-In	nch [Diamete	r Grun	dfos Pum	p with	Dedicate	ed Tubing
0.75	2	4		6	0.02	0.16	1	0.65	1.47	V	Vell Con	lition:								
Time	me Volumes Puraed 1		Flow Ra		Water L (ft-bm		Ph		erature 'C)	Turbidi (NTU)	- 1	Conduc (mS/c		Dissolved Oxygen (mg/L)		DRP mV)	Observations			
13:04		0.5			7.5	0.9		66.3	7	7.07	23	.49	163		1.0	5	3.46	-	181	Cloudy, No Odor
13:12	2	1			15	1.0		66.5	8	7.08	23	.44	120		1.2	4	3.43	-	200	Slightly Cloudy
13:19)	1.5		2	22.5	1.1		66.5	8	7.06	23	.40	89		1.4	8	3.45	-	204	Clear
13:27	7	2			30	0.9		66.5	8	7.07	23	3.43	75		1.5	9	3.31	-	207	Clear
13:34				1.1		66.5	8	7.06	23	3.43	54		1.6	6	3.23		208	Clear		
13:41	3 45		1.1		66.5	8	7.06	23	3.44	48		1.7	1	3.16		208	Clear			
	urge Start Purge End Average Flo Time Time (gpm)				al Gallons Purged	Vo	l Cas lume urgeo	es W	80% lecovery ater Level Depth	at :	Sam	Level pling -bmp)	San Colle Tir	ction		Sampl	le Identification			
12:5	2:54 13:41 0.96				0.	96		45		3		69.50		66.5	58	13	:45	W	CC_6S_	WG032503_0001

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BOE-C6-0103879



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Groundwater Sampling Data Sheet

Project Na	me: B	RC, F	orm	er C-6	Facility (Mar	ch 2003)					Date: 1	03/25/03	3				
Project No.	: EM-2	2303									E	repar	ed By:	NC/CC				
Well Identi				-								oump !	ntake I	Depth (1	t-bmp)	: ~77		
Measureme	ent Poi	nt De	SCI	ription:	Top of	Cas	ing, Blac	kmark										
Depth to LNAPL (1 bmp)	ft-		•	n to Sta evel (ft		W	eli Total (ft-bm	•	:h	W	later Col Height (LN	APL Thi (ft)			(1) Casing ne (gallons)	Three (3) Casing Volumes (gallons
ND			(62.18			89.89	9			27.71			ND	*****		18	54
Well Dia	motor	(in)			Gal	lons	s/Foot			Field	d Equipm	ent:	Horiba	u-22, s	Solinst \	Nater Leve	l Meter	
Weii Dia	0.75						4	6		Purg	je Metho	d:	2-Inch	Diamet	er Grun	dfos Pump	with Dedicate	ed Tubing
0.75 2					0.16		0.65	1.47	7	Well	Conditio	on:						
Time	Casing Volume Flow			Flow Ra		Water Le		Pł	1	Temperat (°C)		urbidity (NTU)	Condu (mS	ctivity /cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations	
11:09	0.5			9	1.5		62.99)	7.3	2	23.12		8	0.	99	3.73	-25	Clear, No Odor
11:13	1			18	2.25		62.99)	7.2	9	23.11		5	1.0	00	4.42	-6	Clear, No Odor
11:18	1.5		2	27	1.8		62.98	3	7.2	9	23.16		4	1.	16	4.02	+17	Clear, No Odor
11:23	2			36	1.5		62.99	9	7.3	2	23.09		4	1.	13	3.80	+28	Clear, No Odor
11:27				2.25		63.00)	7.3	4	23.09		4	1.	13	3.73	+35	Clear, No Odor	
11:31	31 3 54 2.			2.25		63.00)	7.3	5	23.09		4	1.	13	3.65	+38	Clear, No Odor	
Purge Start Time	·				al Gallons Purged	\	tal Ca /olum Purge	nes	80° Reco Water Der	very Level	at Sar	Level npling ft-bmp)	Colle	nple ection me	Sampl	e Identification		
11:03	1	1:31		1.	.9		54		3		67.	72	63	.00	11	:35	WCC_5S_	WG032503_0001
Notes:	1	1:31		1.	.9		54		3		67.	72	63	.00	11	:35	WCC_5S_	WG032503_0001

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid

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Groundwater Sampling Data Sheet

Project Nar	me: BF	RC, Fo	rmer C-6	Facility (Ma	arch 2003)			Date:	03/26/03					
Project No.	: EM-2	2303							red By:					
Well Identif								Pump	Intake D	epth (f	t-bmp):	~71		
Measureme	ent Poi	nt De	scription	Top of C	asing, Black	mark								
Depth to LNAPL (f bmp)	Ft-		pth to Sta Level (fi	1	Well Total (ft-bm)	-		ter Column eight (ft)	LNA	APL Thic	ckness	,	l) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND			60.41		88.30)		27.89		ND			18	54
		/:\		Gallo	ns/Foot		Field I	Equipment:	Horiba	U-22, S	Solinst V	Vater Level	Meter	
Well Dia	meter	(in)	0.75	2	4	6	Purge	Method:	2-Inch	Diamet	er Grun	dfos Pump	with Dedicate	ed Tubing
0.75 2					0.65	1.47	Well C	ondition:	Good (Conditio	n, Solid	Bottom		
Time	Casing Vo		Volume Purged (gallons)	Flow Rate (gpm)	Water Le (ft-bmp	1 1	Ph T	emperature (°C)	Turbidity (NTU)	Condu (mS/		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
12:02	0.5		9	1.8	61.68	7.	.17	23.13	45	0.7	65	3.02	+14	Clear
12:06	1		18	2.3	61.73	3 7.	.20	23.09	48	1.3	37	4.47	+17	Clear
12:10	1.5		27	2.3	61.73	3 7.	.26	23.11	36	1.4	43	4.21	+18	Clear
12:14	2		36	2.3	61.71	7	.25	23.09	23	1.4	49	4.15	+20	Clear
12:18	2.5		45	2.3	61.71	7	.27	23.10	10	1.5	53	4.14	+17	Clear
			54	2.3	61.67	7	.29	23.13	10	1.9	58	4.15	+15	Clear
Purge Start Time		ge End ime		ge Flow 7	otal Gallons Purged	Volu	Casing Imes ged	80% Recovery Water Level Depth	Water at Sar Time (f	mpling	Sam Colle Tir	ction	Sampl	e Identification
11:57	1	2:22		2.2	54		3	65.99	61	.67	12:	25	WCC 9S	WG032603_0001

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid



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Groundwater Sampling Data Sheet

Project Na	me: B	RC,	Forr	mer C-6	Facility	(Mar	ch 2003)				D	ate: (03/26/03	3				**************************************
Project No	.: EM-	230	3	.,			· · · · · · · · · · · · · · · · · · ·			· · · · · · · · · · · · · · · · · · ·	Pi	repare	ed By:	NC/CC	****			
Well Identi											Pı	ump li	ntake D	epth (1	t-bmp)	: ~80		
Measurem	ent Po	int I	Desc	cription:	Top of	Cas	sing, Blue	mark								1		
Depth t LNAPL (bmp)			-	th to Sta Level (fi		w	ell Total (ft-bm	-	h		iter Colu leight (f		LNA	NPL Thi (ft)			e (1) Casing ıme (gallons)	Three (3) Casing Volumes (gallons
ND				70.56			85.7	7			15.21			ND			2.5	7.5
Well Dia	meter	(in)			Gal	llons	s/Foot			Field	Equipme	ent:	Horiba	U-22, S	Solinst I	_evel Met	er	
Wen Dia	0.75						4	6		Purge	Method	l:	2-Inch	Diamet	er Grur	ndfos Pun	np with Dedica	ted Tubing
0.75 2	4		6	0.02	0.16	5	0.65	1.4	7	Well C	Condition	n:						
Time	Casing Volume Nolumes Purged Flo			Flow R (gpm		Water Le		Pl	Т	emperatur (°C)		urbidity (NTU)	Condu (mS/		Dissolve Oxyger (mg/L)	" ORP	Observations	
13:43	0.5		•	1.25	0.4		70.67	7	7.3	37	22.87		770	1.5	59	8.24	+106	Silty
13:45	1			2.5	0.6		70.69)	7.3	33	22.75		610	1.6	30	7.57	+95	Slightly Silty
13:47	1.5		;	3.75	0.6		70.73	3	7.3	36	22.56		430	1.6	30	6.85	+115	Clearing
13:48	2			5	1.25	5	70.73	3	7.3	35	22.66		160	1.6	50	6.65	+119	Clear
13:50					0.6		70.72	2	7.3	37	23.10		38	1.5	59	6.09	+117	Clear
13:52	:52 3 7.5				0.6		70.72	2	7.4	2	22.84		22	1.6	31	6.07	+120	Clear
Purge Start Time		ge E ime	nd	Averag (gp			al Gallons Purged	\	tal Ca /olum Purg		80% Recove Water Le Depti	ery evel	Water at San Time (f	npling	Colle	nple ection ne	Samp	le Identification
13:40	1:	3:52	!	0.	6		7.5		3		73.60	0	70.	72	13	:55	TMW 6	WG032603 0001
Votes:	<u> </u>												 					·

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid

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Groundwater Sampling Data Sheet

Project Na	a <mark>me:</mark> B	RC,	Forr	ner C-6	Facility ((Mar	ch 2003)				Date	: 03/26/03	}				
Project No	.: EM-	2303									Prep	ared By:	NC/CC				W
Well Ident	ificatio	n: T	ΜW	/_9							Pum	p Intake [epth (f	t-bmp)	: ~76		
Measurem	ent Po	int D	esc	ription	Top of	Cas	ing, Blac	kmar	k								
Depth (LNAPL (bmp)	(ft-		-	h to Sta _evel (fi		W	eli Total (ft-bm	-	th		ater Columr Height (ft)	LN/	APL Thi (ft)	ckness		1) Casing e (gallons)	Three (3) Casing Volumes (gallons)
ND				66.36			80.8	3			13.72		ND			2.5	7.5
Well Dia		/im\			Gal	llons	s/Foot			Field	Equipment	Horiba	U-22, S	Solinst I	_evel Meter		-
well Di	ameter	(in)		0.75	2		4	6	ŝ	Purg	e Method:	2-Inch	Diamet	er Grur	ndfos Pump	with Dedicate	ed Tubing
0.75	4		6	0.02	0.16	3	0.65	1.4	47	Well	Condition:						
Time	Casing Volume E				Flow R (gpm		Water Lo		Pl	h	Temperature (°C)	Turbidity (NTU)	Condu (mS	ıctivity /cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
14:31	0.5		•	1.25	1.25	5	67.3°	1	7.5	56	23.05	620	1.5	51	8.49	+155	Silty
14:33	1			2.5	0.6		67.1	7	7.5	53	22.99	390	1.:	51	7.71	+146	Slightly Silty
14:34	1.5		:	3.75	1.25	5	67.12	2	7.4	18	23.15	220	1.:	51	6.49	+132	Slightly Silty
14:36	2			5	0.6		67.04	4	7.4	17	23.17	140	1.	52	6.01	+134	Clear
14:37	4:37 2.5 6.25						66.9	7	7.4	16	23.51	64	1.	52	5.70	+127	Clear
14:39	3			7.5	0.6		66.9°	1	7.4	15	23.64	42	1.	52	5.66	+124	Clear
Purge Start Time						1	al Gallons Purged	Т	otal C Volur Purg	nes	80% Recovery Water Leve Depth	at Sai	Level npling ft-bmp)	Colle	mple ection me	Sampl	e Identification
14:30	4:30 14:39 0.8						7.5		3		69.05	66	.91	1 11	:42	TM/M/ O V	NG032603 0001



Engineering • Environmental • Compliance

Groundwater Sampling Data Sheet

Project N	ame: B	RC,	Forr	ner C-6	Facility (Marc	ch 2003)				Date:	03/27/0	3				
Project N	o.: EM-	230	3								Prepa	ared By:	CC/SM				
Well Iden	tificatio	n:	BL_3	.							Pump	Intake	Depth (ft-bmp)	: ~74		
Measuren	nent Po	int	Desc	ription	: Top of	Cas	ing, Noto	:h									
Depth LNAPL bmp	(ft-		-	h to Sta .evel (fi	1	W	ell Total (ft-bm	-	oth	W	ater Column Height (ft)	LN	APL Th		,	1) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND				70.28			80.9	4			10.66		ND)		1.71	5.10
Wall Di	iomotor	/i			Gal	ons	/Foot			Field	l Equipment:	Horit	a U-22,	Solinst \	Water Level	Meter	
Well Di	Vell Diameter (in) 0.75						4	(6	Purg	e Method:	2-Inc	h Diame	ter Grun	dfos Pump	with Dedicate	ed Tubing
0.75							0.65	1.	47	Well	Condition:	Good	l Conditio	on, Solid	d Bottom		
Time	Casing Volume Purged Floring				Flow Ra		Water Lo		P	h	Temperature (°C)	Turbidity (NTU)		uctivity 6/cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
9:39	0.5			1	0.5		70.5	6	6.8	80	22.18	190	3.	09	8.37	+63	Clear
9:41	1			2	1		70.48	8	6.	53	22.40	140	2.	85	7.62	+59	Clear
9:42	1.5			3	1		70.48	8	6.4	40	22.76	90	2.	83	7.44	+74	Clear
9:43	2			4	1		70.4	7	6.4	42	23.23	65	2.	81	7.40	+78	Clear
9:45					0.5		70.4	7	6.3	38	23.20	55	2.	80	7.35	+81	Clear
9:47				0.5		70.4	7	6.3	36	23.18	48	2.	75	7.32	+83	Clear	
Purge Star Time						al Gallons Purged	т	otal C Volur Purg	mes	80% Recovery Water Level Depth	at S	er Level ampling (ft-bmp)	Colle	nple ection me	Sampl	e Identification	
9:38	9	9:47	•	0	.6		6		3		72.41	7	0.74	9:	51	BL_3_W	G032703_0001

ft-bmp = feet below measuring point LNAPL = light non-aqueous phase liquid

					~ ~ · · · · · · · · · · ·	IVICII	ch 2003)				Date.	03/2	.1703					
Project No.:	: EM-2	303									Prepa	ared E	3y: (CC/SM				
Well Identif	icatio	n: V	/CC	_3S							Pump	Intal	ke D	epth (fi	t-bmp):	~71		
Measureme	nt Poi	nt D	esc	ription:	Top of	Cas	ing											
Depth to LNAPL (fi bmp)	4.		-	h to Sta .evel (ft		W	ell Tota (ft-bn	-	oth		ater Column Height (ft)		LNA	PL Thic	ckness	(1) Casing e (gallons)	Three (3) Casing Volumes (gallons)
ND	64.18 88.81								24.63			ND			16	48		
Well Die.	Gallons/Foot F										Equipment:	Н	oriba	U-22, S	olinst V	Vater Level	Meter	
wen biar	meter	(in)	0.75 2 4 6						6	Purg	e Method:	2-	Inch	Diamete	er Grun	dfos Pump	with Dedica	ted Tubing
0.75 2	4	6	;	0.02	0.16		0.65 1.47				Condition:	Sc	oft Bo	ttom				
Time	Casing Volume Purged	s	Pι	olume urged allons)	ne Flow Rate		Water L (ft-bm		Р	h	Temperature (°C)	Turbi (NT	-	Condu (mS/		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
11:02	0.5			8	1.6		64.3	9	6.2	26	24.75	650	0	1.5	55	8.66	-103	Slightly Gray, Odor
11:09	1			16	1.2		64.4	2	6.1	15	23.90	420	0	1.4	2	8.13	-115	Clear
11:17	1.5			24	1		64.4	2	6.7	72	22.35	38	0	1.3	19	7.33	-110	Slightly Cloudy, Odor
11:25	2			32	1		64.3	7	6.6	66	23.50	21	0	1.3	86	5.69	-89	Slightly Cloudy, Odor
11:37	2.5			40	0.9		64.3	7	6.6	30	23.60	10	0	1.3	30	5.62	-88	Slightly Cloudy, Odor
11:45	3			48	1		64.4	7	6.5	57	26.63	45	5	1.3	35	4.99	-85	Slightly Cloudy, Odor
Purge Start Time		ge En ime	nd	Average Flow Total G			al Gallons Purged	3 7	otal C Volur Purg	nes	80% Recovery Water Level Depth	а	Vater It Sam Ime (ft		Colle	nple ection ne	Samp	le Identification
10:57	1	1:50			1		48		3		69.12		64.4	14	11	:48	WCC_039	_WG032703_0001

Project Na			orr	ner C-6	Facility (Mar	ch 2003)					03/27/03					
Project No												ared By:					
Well Ident				=							Pump	Intake D	epth (f	t-bmp)	: ~80		
Measurem		int D	esc	ription	Top of	Cas	sing, Blue	mark									
Depth 1 LNAPL (bmp)	(ft-		-	h to Sta _evel (fi		W	ell Total (ft-bm	-	th		ater Column Height (ft)	LNA	PL Thi			1) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND		69.59 85.59							16		ND			2.5	7.5		
Well Dia		/i)			Gal	lons	s/Foot			Field	Equipment:	Horiba	U-22, S	Solinst '	Water Level	Meter	
Well Dia	ameter	(111)	0.75 2 4 6 Pu i							Purge	e Method:	2-Inch	Diamet	er Grur	ndfos Pump	with Dedicate	ed Tubing
0.75	4	6							Well	Condition:	Good						
Time	Casing Volume Purge	es	P	folume Flow Rate War			Water Lo		Ph	, 7	Femperature (°C)	Turbidity (NTU)	Condu (mS/	ctivity /cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
13:03	0.5		•	1.25	0.6		70.16	3	6.3	9	25.27		5.7	75	8.4	+87	Cloudy
13:07	1			2.5	0.3		70.14	4	6.4	5	24.03		5.4	49	7.26	+87	Slightly Cloudy
13:09	1.5		(3.75	0.4		70.14	4	6.5	1	23.95		5.4	48	6.89	+85	Slightly Cloudy
13:13	2			5	0.3		70.14	4	6.5	5	23.27		5.4	41	6.65	+81	Slightly Cloudy
13:15	2.5		(6.25	0.6		70.14	4	6.6	1	23.21	***	5.3	39	6.61	+80	Slightly Cloudy
13:18	3			7.5	0.4		70.10)	6.6	5	23.52		5.3	37	6.62	+80	Slightly Cloudy
Purge Start Time		ge En Time	d	, -	ge Flow Total Gallons Vo				otal Ca Volum Purge	nes	80% Recovery Water Level Depth	Water at San Time (f	npling	Colle	mple ection me	Sample	e Identification
13:01	1	3:18		13:18 0.4 7.5 3							72.79	70.	10	13	:20	TMW_1_V	VG032703_0001

ıme: B	RC, I	Forr	ner C-6	Facility (Mar	ch 2003)				Date	03/27	'/03					
.: EM-	2303									Prepa	ared B	y: (CC/SM				
ificatio	n: T	ΜW	_4							Pum	intak	e D	epth (fi	-bmp):	~72		
ent Po	nt D	esc	ription:	Top of	Cas	ing											
(ft-		-		l	W		-	th	W	later Column Height (ft)	L	.NA	PL Thic (ft)	ckness	-	-	Three (3) Casing Volumes (gallons
66.04 80.24								14.2			ND			2.28	6.8		
	/i\			Gal	ions	/Foot			Field	l Equipment:	Hoi	riba	U-22, S	olinst V	Vater Level	Meter	
ameter	(IN)		0.75	2		4	6	3	Purg	e Method:	2-Ir	nch	Diamete	er Grun	dfos Pump	with Dedicate	ed Tubing
4	6	6	0.02	0.16		0.65 1.47			Well	Condition:	Go	od,	Soft Bot	tom			
Volume	s	Ρ	urged			ate Water Level		Р	h	Temperature (°C)		• 1			Dissolved Oxygen (mg/L)	ORP (mV)	Observations
0.5			1.25	0.25	5	66.5	7	6.6	60	23.08			1.5	51	5.87	+124	Cloudy
1			2.5	0.4		66.4	0	6.6	64	23.00			1.4	9	5.45	+119	Cloudy
1.5		;	3.75	0.6		66.2	1	6.6	66	23.01	***		1.4	1	5.31	+115	Cloudy
2			5	0.6		66.1	3	6.6	69	22.99			1.4	0	5.24	+113	Cloudy
2.5		(3.25	0.6		66.1	3	6.6	60	23.13			1.4	4	5.01	+111	Clear
3			7.5	0.6					58	22.94			1.4	.1	5.10	+113	Clear
		nd			Total Gallons To			Volu	mes	80% Recovery Water Leve Depth	at	San	npling	Colle	ection	Sampl	e Identification
1	4:24		0	.4		7.5		3.	3	68.88		66.	56	14	:25	TMW 4 \	NG032703_0001
	casing Volume Purger 0.5 1 1.5 2 2.5 3 Pur	ameter (in) Casing Volumes Purged 0.5 1 1.5 2 2.5 3 Purge Er Time	ification: TMW ient Point Descrito (ft- Casing Volumes Purged 0.5 1 1.5 2 2.5 3 Purge End	EM-2303	Casing Volume Purged (gallons) 0.5 1.25 0.25 1.5 3.75 0.6 2.5 6.25 0.6 2.5 6.25 0.6 2.5 6.25 0.6 2.5 6.25 0.6 2.5 0.6	Casing Volume Purged (gallons) Description Casing Volumes Purged (gallons) Description Casing Volumes Purged (gallons) Description Casing Volume Description Description	TMW_4	Casing Volume Purged (gallons) Purged 1.25 0.25 0.6 66.21 2.5 6.25 0.6 66.13 2.5 6.25 0.6 66.56 Purge End Time Row Total Gallons Purged (gpm) Purged Purged Purged Purged Row Row Purged Row Row	Section TMW_4	Casing Volumes Purged (gallons) Purged (gallons) Descriptions Purged (1.5) Descriptions Descriptions Purged (1.5) Descriptions Purged (1.5) Descriptions Purged (1.5) Descriptions Descriptions Purged (1.5) Descriptions Purged (1.5) Descriptions Description	Preparation Preparation	Prepared B Pump Intak Pum	Prepared By: 0 Pump Intake D Pump Intake	Prepared By: CC/SM Pump Intake Depth (fittent Point Description: Top of Casing (fittent Description: Top of Casing Volumes Purged Description: Total Casing Volumes	Prepared By: CC/SM Pump Intake Depth (ft-bmp) Pump Intake Intak	Prepared By: CC/SM Pump Intake Depth (ff-bmp): ~72	Prepared By: CC/SM Pump Intake Depth (ft-bmp): ~72

Project Na				ner C-6	racility (war	cn 2003)					: 03/27/						
Project No												ared By						
Well Ident											Pum	Intake	Dept	th (ft-br	n p):	~78		
Measurem		int D	esc	ription:	l Top of	Cas	sing		,							 		
Depth LNAPL bmp)	(ft-		-	h to Sta .evel (ft		W	ell Tota (ft-bn	-	th		ater Column Height (ft)	LI		Thickn (ft)	ess	,	l) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND		65.97 83.59								17.62			ND			2.8	8.4	
Wall Di	Well Diameter (in) Gallons/Foot Fi											Hori	oa U-2	22, Solir	st W	ater Level I	Meter	<u> </u>
weii Di	ameter	(111)		0.75	2		4	6		Purge	e Method:	2-Ind	ch Dia	meter G	rund	fos Pump v	vith Dedicate	ed Tubing
0.75	4	•	3	0.02	0.16	5	0.65	1.4	.7	Well	Condition:	Goo	d, Sof	t Botton)			
Time	Casing Volume Purge	es	Pι	olume urged allons)	Flow R (gpm	Rate Water Level				h -	Femperature (°C)	Turbidit (NTU)	. 1	onductivi (mS/cm)	ty	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
15:08	0.5			1.4	0.4		66.5	6	7.0)5	23.15			1.69		9.82	+186	Slightly Turbid
15:10	1		:	2.8	0.7		66.4	8	6.6	88	23.22			1.64		6.41	+174	Slightly Turbid
15:12	1.5		4	4.2	0.7		66.4	8	6.6	64	23.31			1.61		6.36	+168	Slightly Turbid
15:14	2			5.6	0.7		66.4	8	6.6	35	23.39	***		1.62		6.11	+155	Clear
15:16	2.5		•	7.0	0.7		66.4	6	6.6	33	23.45			1.62		6.08	+153	Clear
15:17	3			8.4	1.4		66.4	7	6.6	31	23.51	****		1.61		6.06	+151	Clear
Purge Start Time		ge Er Time	nd		ge Flow om)	e Flow Total Gallons To				asing nes ed	80% Recovery Water Leve Depth	at S	er Lev amplin (ft-bm	ng C	Samp collect Time	tion	Sample	e Identification
15:04	1	5:19		0	.6		8.4		3		69.49	6	6.47		15:1	9	TMW_7_V	VG032703_0001

Projec	t Na	ne: BR	C, F	orm	er C-6 I	Facility (Mar	ch 2003)				Date:	03/28/	03					
Projec	t No.	: EM-2	303									Prepa	ared By	: SI	M/CC				
		ication		=	-							Pump	Intake	De	pth (ff	:-bmp)	~70		1880 - 10 11011
Measu	reme	nt Poi	ıt De	SCI	ription:	Top of	Cas	ing											
LNA	pth to LPL (f mp)	4_		-	n to Sta evel (ft		W	eli Tota (ft-bn	_	th		ater Column Height (ft)	L	NAP	PL Thic (ft)	ckness	•	1) Casing e (gallons)	Three (3) Casing Volumes (gallons
	ND	60.87 77.33						3			16.46			ND			10.7	32.10	
Wol	Il Diameter (in)										Field	Equipment:	Hori	ba l	J-22, S	olinst \	Vater Level	Meter	
776 1	ii Dia	inetei (0.75	2						e Method:	2-In	ch D	Diamete	er Grun	dfos Pump	with Dedicate	ed Tubing
0.75	2	4	6		0.02	0.16	5	0.65	1.4	47	Well	Condition:	Soli	d Bo	ottom				
Time		Casing Volumes Purged		Pu	lume rged llons)		Flow Rate (gpm)		evel p)	Р	h	Temperature (°C)	Turbidit (NTU)	- 1	Condu (mS/		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
10:53	3	0.5		5	.35	2.68	}	61.2	3	7.4	10	23.9	>999		1.8	32	11.77	+155	Silty, No Odor
10:58	3	1		10	0.70	1.07	7	61.6	8	7.3	36	23.9	>999		1.6	57	11.50	+90	Silty, No Odor
11:01		1.5		16	3.05	1.78	3	61.1	5	7.2	27	23.8	>999		1.6	8	11.42	+136	Silty, No Odor
11:06	3	2		21	1.40	1.07	,	61.6	6	7.7	72	23.6	>999		1.6	6	11.82	+137	Silty, No Odor
11:12	2	2.5		26	3.75	0.89)	61.6	6	7.3	30	23.7	241		1.6	64	12.11	+143	Silty, No Odor
11:15	5	3		32	2.10	1.67		61.6	1	7.2	29	23.6	244		1.6	35	12.38	+142	Silty, No Odor
Purge Tim			e End me	b	Averag (gp	ge Flow om)			T	otal C Volur Purg		80% Recovery Water Leve Depth	at S	ter L Samp e (ft-l	- 1	Colle	nple ection ne	Sampl	e Identification
10:5	51	11	:15		1.3	34		32.10		3		64.16	•	31.6	1	11	:25	XMW_19_	WG032803_0001

Project Na	ne: B	RC, For	mer C-6	Facility (M	arch 2003)			Date:	03/28/03	}				
Project No.	: EM-	2303						Prepa	ared By:	SM/CC				
Weil Identif	icatio	n: TMV	V_08					Pump	Intake D	epth (1	it-bmp)	: ~77		
Measureme	nt Po	int Des	cription	Top of C	asing									
Depth to LNAPL (f bmp)	- 1	-	th to Sta Level (f		Well Tota (ft-bn	•	W	ater Column Height (ft)	LNA	NPL Thi		1	1) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND			67.71 82.61					14.90		ND			2.38	7.14
Well Dia	motor	(in)		Gallo	ns/Foot		Field	l Equipment:	Horiba	U-22, S	Solinst '	Water Level	Meter	
Well Dia	meter	(111)	0.75	2	4	6	Purg	e Method:	2-Inch	Diamet	er Grur	ndfos Pump	with Dedicate	ed Tubing
0.75	4	6	0.02	0.16	0.65	1.47	Well	Condition:	Soft Bo	ottom				
Time	Casing Volume Purge	es F	/olume Purged gallons)	Flow Rate (gpm)	Rate Water Leve		Ph	Temperature (°C)	Turbidity (NTU)	Condu (mS	ıctivity /cm)	Dissolved Oxygen (mg/L)	ORP (mV)	Observations
12:50	0.5		1.19	0.60	68.10	6	5.86	23.9	641	1.	74	12.87		Cloudy, No Odor
12:52	1		2.38	0.60	68.20) 7	.02	23.2	185	1.6	63	12.90		Cloudy, No Odor
12:54	1.5		3.57	0.60	68.14	4 7	.04	22.9	55	1.0	65	12.88		Clear
12:56	2		4.76	0.60	68.1	4 7	.03	23.1	30	1.6	66	12.68		Clear
12:58	2.5		5.95	0.60	68.1	2 6	5.91	23.2	26	1.6	65	12.41		Clear
13:00	3		7.14	0.60	68.1	1 7	7.06	23.1	24	1.6	35	12.51		Clear
Purge Start Time		ge End Fime		ge Flow 1 om)				80% Recovery Water Level Depth	Water at San Time (f	npling	Colle	nple ection me	Sample	e Identification
12:48	1:	3:00	13:00 0.60 7.14				3	70.69	68.	11	13	:01	TMW 08 \	WG032803 0001

Project Na			orm	er C-6	Facility (Mar	ch 2003)				Date:	03/28/03					
Project No.	: EM-2	2303									Prepa	red By: 3	SM/CC				
Well Identi			=	"							Pump	Intake D	epth (f	t-bmp)	: ~80		
Measureme	ent Poi	nt De	escr	iption:	Top of	Cas	ing										,
Depth to LNAPL (1 bmp)	ft-		-	to Sta	1	W	ell Tota (ft-bn	•	th		nter Column Height (ft)	LNA	PL Thio	ckness		1) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND	69.94 85.09								15.15		ND			2.42	7.27		
Wall Dia		/i>			Gal	lons	s/Foot			Field	Equipment:	Horiba	U-22, S	Solinst \	Vater Level	Meter	
weii Dia	0.75 2 4 6								Purge	Method:	2-Inch	Diamete	er Grur	dfos Pump	with Dedicate	ed Tubing	
0.75	4	6		0.02	0.16		0.65	1.4	7	Well (Condition:						
Time	Casing Volume Purged	s	Pu	lume rged llons)	Flow R		ite Water Level		Ph	Т	remperature (°C)	Turbidity (NTU)	Condu (mS/		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
15:59	0.5		1.	.21	0.61		72.9	2	6.7	6	24.7	275	2.6	31	11.72		Cloudy, Odor
14:02	1		2	.42	0.61		72.9	4	6.9	0	23.4	279	2.6	65	12.25		Cloudy, Odor
14:04	1.5		3	.63	0.61		72.2	1	6.8	7	23.0	312	2.6	35	12.18		Cloudy, Odor
14:06	2		4	.84	0.61		72.1	7	7.0	2	23.0	156	2.7	75	11.83		Clear, Odor
14:08	2.5		6	.05	0.61		72.0	7	6.8	7	23.0	98	2.6	66	11.64		Clear, Odor
14:10	3		7	.27	0.61		72.0	7	6.9	4	22.8	6	2.6	69	11.59		Clear, Odor
Purge Start Time		ge En	d		ge Flow om)	Total Gallons Purged Total Gallons Purged Purge			nes	80% Recovery Water Level Depth	Water at San Time (f	npling	Colle	nple ection me	Sampl	e Identification	
13:57	1	4:10		0.	0.61 7.27 3					72.97	72.	07	14	:11	TMW 02	WG032803 0001	

Project N	lame: E	BRC,	Forn	ner C-6	Facility (Mar	ch 2003)				Date	: 03/28/03	}				
Project N	lo.: EM	-230	3								Prepa	ared By:	SM/CC				
Well ider	ntificati	on:	TMW	_05							Pumj	Intake [epth (f	t-bmp)	: ~78		
Measure	ment Po	oint	Desc	ription:	Top of	Cas	ing										
Depth LNAPi bm;	_ (ft-	1	•	h to Sta .evel (ft	1	W	ell Total (ft-bm	•	th	W	later Column Height (ft)	LNA	APL Thi (ft)	ckness	l	e (1) Casing me (gallons)	Three (3) Casing Volumes (gallons)
NE)	67.61 82.92								15.31		ND			2.45	7.35	
W-U D	Well Diameter (in)										d Equipment:	Hanna	Water	Parame	eter Meter	, Solinst Wate	r Level Meter
wen b	namete	r (in	,	0.75	2		4	6	i	Purg	je Method:	2-Inch	Diamet	er Grur	dfos Pum	p with Dedica	ted Tubing
0.75	2 4		6	0.02	0.16	5	0.65	1.4	17	Well	Condition:	Solid E	Bottom				
Time	Casir Volum Purge	ies	Pι	olume urged allons)	d Flow Rate		Water Le		Р	h	Temperature (°C)	Turbidity (NTU)	Condu (mS		Dissolved Oxygen (mg/L)	1 (1121)	Observations
15:06	0.5)	1	1.23	0.21		67.7	8	7.4	13	23.2	271	0.9	95	11.21	+147	Cloudy, No Odor
15:16	1		2	2.45	0.41		67.8	5	7.7	71	22.4	114	0.9	91	11.16	+146	Cloudy, No Odor
15:19	1.5)	3	3.69	0.41		67.8	7	7.7	76	22.3	97	0.0	37	11.05	+123	Cloudy, No Odor
15:21	2		4	1.92	0.62	2	67.7	1	7.7	75	20.5	39	0.6	31	11.85	+123	Clearing, No Odor
15:24	2.5	•	(3.15	0.41		67.7	3	7.6	66	22.2	38	0.6	35	10.65	+141	Clearing, No Odor
15:26	3		7	7.38	0.62					58	21.8	21	0.6	35	10.16	+152	Clear, No Odor
Purge Sta Time	rt Pu	rge E Time		nd Average Flow Tota		al Gallons Purged		otal C Volur Purg		80% Recovery Water Leve Depth	Water at Sar Time (Colle	mple ection me	Sam	ole Identification	
15:00		15:26 0.28 7.38			3		70.67	67	.71	15	:26	TMW_05	_WG032803_0001				

Project Na	me: B	RC, F	orm	er C-6 I	Facility (Mar	ch 2003)				Date:	03/2	28/03					
Project No.	.: EM-	2303									Prepa	ared I	By: S	SM/CC				·
Well Identi	ficatio	n: D	AC_	P1							Pump) Inta	ke D	epth (f	t-bmp)	: ~79		
Measuremo	ent Po	int De	esc	ription:	Top of	Cas	ing					.,					<u></u>	
Depth to LNAPL (1 bmp)	i		-	n to Sta evel (ft		W	ell Tota (ft-bn		pth		ater Column Height (ft)		LNA	PL Thic	cknes		1) Casing e (gallons)	Three (3) Casing Volumes (gallons)
ND		65.57 90.42						.2			24.85			ND			6.15	48.75
Wall Dia	Gallons/Foot										Equipment:	Н	anna	Water I	Parame	eter Meter, S	Solinst Water	Level Meter
Well bla	meter	(111)		0.75 2 4 6						Purg	e Method:	2-	-Inch	Diamet	er Grur	ndfos Pump	with Dedicate	ed Tubing
0.75 2	## 4	6		0.02	0.16		0.65	1	.47	Well	Condition:	S	oft Bo	ottom				
Time	Casing Volume Purge	s	Pu	lume irged llons)	ume Flow Rate		Water L (ft-bm		Р	h	Temperature (°C)	Turbi (NT		Condu (mS/		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
16:22	0.5		8	.13	1.16		67.9	3	7.0	03	23.0	39	9	2.4	12	10.35	+174	Clear, No Odor
16:27	1		10	5.25	1.62		68.1	2	7.	17	22.6	6	1	2.2	26	9.55	+127	Clear, No Odor
16:32	1.5		24	4.39	1.63	;	68.2	1	7.	11	22.6	44	4	2.3	36	9.38	+179	Clear, No Odor
16:40	2		32	2.52	1.0		68.3	2	7.	12	22.6	0)	2.3	38	9.34	+217	Clear, No Odor
16:46	2.5		40	0.65	1.4		68.3	0	7.	13	22.4	0)	2.6	31	9.71	+211	Clear, No Odor
16:53	3		48	3.75	1.2		68.3	3	7.	16	22.1	0)	2.4	14	9.98	+86	Clear, No Odor
Purge Start Time	1	ge En Iime	d		Average Flow (gpm) Total			S	Total C Volur Purg	mes	80% Recovery Water Leve Depth	, a	Nater at Sam ime (fl		Colle	nple ection me	Sampl	e Identification
16:15	1	16:55 1.2 48.75					3	}	70.54		68.	33	16	:53	DAC P1	WG032803 0001		

Project N	lame	BRC	C, Forr	ner C-6	Facility (N	March 2003	3)			Date:	03/28/03	}				
Project N	lo.:	EM-23	303							Prepa	red By:	SM/CC				
Nell Iden	ntific	ation:	: WCC	_7S						Pump	Intake D	epth (f	t-bmp)	-72		
Measure	ment	Point	t Desc	ription	Top of (Casing, No	tch									
Depth LNAPL bmp	_ (ft-	W	-	h to Sta Level (ft	I	Well Tot (ft-b	-	oth		ater Column Height (ft)	LNA	NPL Thi (ft)		- - " (1) Casing e (gallons)	Three (3) Casing Volumes (gallons
ND)		63.71 90.43							26.72		ND		,	7.37	52.11
Well D	liama	stor /i	\		Gall	ons/Foot			Field	Equipment:	Hanna	Water	Parame	eter Meter, S	olinst Water	Level Meter
weii D	name	ster (II	11)	0.75	2	4		6	Purge	e Method:	2-Inch	Diamet	er Grur	dfos Pump	with Dedicate	ed Tubing
0.75 2	2	4	6	0.02	0.16	0.65	1.	.47	Well	Condition:	Soft B	ottom, V	Vell Re	quires New	Expansion Ca	ap
Time	Vo	asing lumes urged	P	dume		te Water (ft-b		Pl	h -	Temperature (°C)	Turbidity (NTU)	Condu (mS/		Dissolved Oxygen (mg/L)	ORP (mV)	Observations
17:37		0.5		3.69	1.24	64.	12	7.5	53	22.2	5	2.0	09	9.85	+174	Clear, No Odor
17:44		1	1	7.38	1.24	64.	13	7.3	31	21.9	10	1.9	94	9.96	+136	Clear, No Odor
17:50		1.5	2	6.07	1.45	64.	14	7.3	30	22.0	8	1.7	73	9.42	+179	Clear, No Odor
17:57		2	3	4.76	1.24	64.	15	7.3	31	21.8	9	1.6	62	9.42	+197	Clear, No Odor
18:02		2.5	4	3.45	1.74	64.	17	7.3	30	22.0	10	1.5	59	9.18	+153	Clear, No Odor
18:08		3	5	2.14	1.45	64.	16	7.3	32	21.3	5	1.7	79	9.63	+175	Clear, No Odor
Purge Star Time	rt	Purge Tim			rage Flow Total Gallons (gpm) Purged			otal C Volun Purg	nes	80% Recovery Water Level Depth	Water at Sar Time (f	npling	Colle	nple ection ne	Sample	e Identification
17:30		18:08 1.37 52.14					3		69.05	64.	16	18	:08	WCC 7S	WG032803 0001	



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DAILY FIELD REPORT

Project Name: Boding 0-1	Torvance Project #:	Date: 3/25/03
Personnel: NC/CC	i	
rask: <u>Sample</u> gro		per March 2003
Time Arrived at Site:	Time Left Site:	Total Hours at Site:
Odometer (Start):	Odometer (End):	Total Miles:
Horiba U-22 Water C PID/FID Type: Submbersible Pump Generator Type:		erial #: Serial #: erial #:
and safety meeting, personnel/visito Arrived on Site	rs at site, calibration times and metho	safety meeting. Safety meeting. amin ated equipment.
Client Signature (if applicable):		Date:
	. Page <u> </u>	



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Project Name: Bosing C-6, Torvance Project #: EM2303 Date: 3/25/03
(1) (1) (1) (1) (1) (1) (1) (1) (1) (1)
Calibrated Horiba u-22, and Solinist
A.M Dug the to uncover buried wells and gauged. Could not locate wcc-125 under dirt.
could not locate wcc-125 under dirt.
Removed tubing from TMW-2 to gauge.
Removed tubing from TMW-2 to gauge.
dumpster on top. Broken glass and metal pieces.
11:03 - start ouraina NCC-55.
11:03 - start purging NCC-55. 11:35 - Collected sample MCC-55_WG032503-0001.
12:54- Start purge WCC-65. 13:45- collected sample WCC-65-WG032503-0001



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DAILY FIELD REPORT

Project Name: BR (C-6, Torr	ance Project #: EMZ	303 Date: 3/26/03
Personnel: NO CO	1	• •
Task: Sample group	dwater wells per	Marih 2003
GW Sampling pro-	tocol.	
	T	
Time Arrived at Site:	Time Left Site:	Total Hours at Site:
Odometer (Start):	Odometer (End):	Total Miles:
Equipment List:		
Solinst Water Level Me	ter Serial #:	
□ Solinst Water/Product L	.evel Interface Meter Serial #:	·
	ality Meter Serial #:	
, ,	Serial Serial	
		Serial #:
Generator Type:	Serial	#:
☐ Company Truck L	icense #:	·
Other(s): Rediflow	v Var. Freq. Drive.	
	1	
and safety meeting, personnel/visitors a	at site, calibration times and methods.)	logical sequence. Include tailgate health Covipment. Meeting.
		<u> </u>
Client Signature (if applicable):		Date:
	Page of 2	



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Project Name: BRUI-6, Torvanit Project #: EM 2303 Date: 3/26/03
The state of the s
Calibrated Horiba 4-22 and Solinist.
8:23 - start purge TMW-10
8:40 - Collected Sample TMW-10-WG032603-0001
9:18-start purge TMW-11
9:30 - Collected sample TMW-11-WG032603_0001.
9:58 - start purge TMW-14
10:12 - collected sample TMW-14-WG032603-0001
11:02- start purge TMW-15
11:25 - collected sample TMW-15-WG032603-0001
11:57-start purge wcc-9s.
unsafe to access well, trip hazard. Well box filled with
mud up to top of casing. Well bottom very muddy.
12:25- collected sample wcc-95-WG032603-0001
13:40- start purge TMW-6
13:55 - collected sample TMW-6-WG032603-0001
14:30 - Start purged. TMW-9.
Well casing above ground is very loose and removable.
Very difficult to keep upright, Meeds repair.
14:42 - collected sample TMW-9-WG032603-0001



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DAILY FIELD REPORT

	1	M 240 3 Date: 3/27/03
		/A
ask: March 2003	Sampling.	
	0	
Fime Arrived at Site: 0645	Time Left Site:	Total Hours at Site:
Odometer (Start):	Odometer (End):	Total Miles:
Equipment List:		
•	eter Serial#:	
_	,	
	Level Interface Meter Serial	•
	ality Meter Serial #:	
	<u> </u>	Serial #:
Submbersible Pump	Type: grundtos	Serial #:
Generator Type:	portable	Serial #:
☐ Company Truck	License #: whatel	
_		
•		
lesription of Work Performed: (nd safety meeting, personnel/visitors		chronological sequence. Include tailgate healt ods.)
Country Sunall	5; 2 EB's; 1 TB,	160 1 N. I
surgice o acci.); 2 ED\$; [1 D,	116,100
Client Signature (if applicable):	Cuts Conn	Date: 3 27/0
- , ,,	Page of	



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Project Name:	Project #:	Date:
7:00 AM WET AT STAR	bucks	- Auditoria National
7:56 Am Finally for	and first le	Dell, Conducted
Safety me	eting calibr	ated equipment
AND bet	UP FOR DAY	1. Create SEB+FB.
9:38 STARTED Pur	ge BL3 1	12062 etc. top
9:50 SAMPLED		
10:57 STARTED Purg	e WCC 03S	Ancess to
Well Diffi	ult.	•
11:48 Sampled W	XC-03S	
12:27 ArriveD @ 0	Jell TMWI	. Well was
challenging -	to FIND AN	on Access
WAS DIFFIC	ult. Horiba	'S Turbidity
STOPPED WE	of King Prof	Perly.
13:01 STARTED PC	maind Till	11
13:05 Restarted R	beging After	generator cause
13:20 Sampled.	0 1	
14:07 STARTED PUR	GING-TWW-	4 - TURBITY NOTWOOD
14:25 Sampled	1 3	
15:04 STARTED PO	rge of Tw	TW
15:19 Sampled is		te on TMW7
110:00 Left SiTE		1
		



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DAILY FIELD REPORT

,	PANCE Project #: Em ZH	05 Date: 3/28/03
	Sub Contractors:	
ask: GW SAMPL	ing March 2003	3
ime Arrived at Site: 7:00AM	Time Left Site:	Total Hours at Site:
dometer (Start):	Odometer (End):	Total Miles:
quipment List: Solinst Water Level Met	er Serial #:	
_	evel Interface Meter Serial #:	
Submbersible Pump	Type: Grundfos	
Company Truck Li	CEMBLE Serial Conse #: Rental WATER METER	
ican Petur		ogical sequence. Include tailgate health Rent A Solin atom I AND Setting
1:51 - 14 ter		



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Project Name:	Project #:	Date:
	_	
- up in the I	DITCH, STARTE	D Yuraing.
11:25 Sampled XII	1W-19	
12:48 located TN	N-08 And ST	ARTED Purging
13:01 Sampled		
13:57 LOCATED TING	1-02 And S	marteo Purging.
(Locating the we	Ils is Time consu	AMING WITH LITTLE
Landmaeks)		
14:11 Sampled		
15:00 Purged TN	W-05 AND H	AD the water Merer De
15:15 RESTARTED		ceased
15:26 Sampled		
16:15 Purges DA	C-P1	
16:53 Samoles		
17:30 STARTED PR	urging WCC-	15. Well need 5
new CAD		
18:08 Sampled		
18:44 Teft 517	E	
		AND
		, <u>, , , , , , , , , , , , , , , , , , </u>



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Instrument Calibration Sheet

Project Name:	Project #: FM 2303
Project Name: DEING C-6 TORPANCE	EM 2505

Date	Time	Instrument Type	Instrument Serial No.	Calibration Method	Calibrated By	Remarks
3/25/03	7:23	Solinot	29483 NC	STEEL TAPE	NC	-
3/25/03		Horiba	2012002	UNU SolutiON	NC	
3/24/03	7:18	Solinst	24483	STUGLTAPE	NC	
3/26/03	7:30	Horiba	2012002	UNU.501	NC.	
3/27/03	8:02	Solinst	29483	Stooltage	SM	
3/27/03	8:36	Horiba	2012002	Unv. Solutes	n SM	
3/28/03	10:18	solinst	29483	steel tage	SW	
3/28/03	10:30	horitra	2012002	Van Solution	:SM'	
/ /						



QA/QA Sample Identification Form

Project Name: BRC, Former C-6 Facility (March 2003 Sampling Event)

Project #: EM-2303

Date	Time QA/QC Sample Type (Duplicate, Field Blank, Equipment Blank, Split)		Sample ID	Sample Location	Primary Sample Reference	Analytical Method(s)	Organic-Free Water Source and Reference	Name
3/25/03	NA	TRIP BLANK	TB_TAIT032503_0001	NA	NA	8260B	NA	NC/CC
3/26/03	NA	TRIP BLANK	TB_TAIT032603_0001	NA	NA	8260B	NA	NC/CC
3/27/03	9:45	EQUIPMENT BLANK	EB_TAIT032703_0001	BL3	NA	8260B	STL	SM/CC
3/27/03	9:25	FIELD BLANK	FB_TAIT032703_0001	BL3	NA	8260B	STL	SM/CC
3/27/03	15:19	DUPLICATE	TMW_7_WG032703_0002	TMW_7	TMW_7_WG032703_0001	8260B	NA	SM/CC
3/27/03	NA	TRIP BLANK	TB_TAIT032703_0001	NA	NA	8260B	NA	SM/CC
3/27/03	15:24	EQUIPMENT BLANK	EB_TAIT032703_0002	TMW_7	NA	8260B	STL	SM/CC
3/28/03	11:27	DUPLICATE	XMW_19_WG032803_0002	XMW-19	XMW19_WG032803_0001	8260B	NA	SM/CC
3/28/03	NA	TRIP BLANK	TB_TAIT032803_0001	NA	NA	8260B	NA	SM/CC
3/28/03	NA	FIELD BLANK	FB_TAIT032803_0001	XMW_19	NA	8260B	STL	SM/CC

Investigation Derived Waste (IDW) Inventory Record

Project Name: BRC, Former C-6 Facility (March 2003 Sampling)
Project No.: EM-2303

Accumulation Date	Drum/Bin	Identifier	Waste Origination	Contents	Container Location	Inventoried By	Labeled By
3/25/03	Drum	C6-IDW175-TA	WCC-5S	Ground Water	Lot 8	NC/CC	NC
3/25/03	Drum	C6-IDW176-TA	WCC-6S	Ground Water	Lot 8	NC/CC	NC
3/25/03	Drum	C6-IDW177-TA	TMW-10	Ground Water	Lot 8	NC/CC	NC
3/25/03	Drum	C6-IDW178-TA	TMW-11	Ground Water	Lot 8	NC/CC	NC
3/25/03	Drum	C6-IDW179-TA	TMW-14	Ground Water	Lot 8	NC/CC	NC
3/25/03	Drum	C6-IDW180-TA	TMW-15	Ground Water	Lot 8	NC/CC	NC
3/25/03	Drum	C6-IDW181-TA	WCC-9S	Ground Water	Lot 8	NC/CC	NC
3/26/03	Drum	C6-IDW182-TA	TMW-6	Ground Water	Lot 8	NC/CC	NC
3/26/03	Drum	C6-IDW183-TA	TMW-9	Ground Water	Lot 8	NC/CC	NC
3/27/03	Drum	C6-IDW184-TA	BL-03	Ground Water	Lot 8	NC/CC	NC
3/27/03	Drum	C6-IDW185-TA	WCC-3S	Ground Water	Lot 8	SM/CC	CC
3/27/03	Drum	C6-IDW186-TA	TMW-1	Ground Water	Lot 8	SM/CC	CC
3/27/03	Drum	C6-IDW187-TA	TMW-4	Ground Water	Lot 8	SM/CC	SM
3/27/03	Drum	C6-IDW188-TA	TMW-7	Ground Water	Lot 8	SM/CC	CC
3/28/03	Drum	C6-IDW189-TA	XMW-19	Ground Water	Lot 8	SM/CC	SM
3/28/03	Drum	C6-IDW190-TA	TMW-8	Ground Water	Lot 8	SM/CC	SM
3/28/03	Drum	C6-IDW191-TA	TMW-2	Ground Water	Lot 8	SM/CC	SM
3/28/03	Drum	C6-IDW192-TA	TMW-5	Ground Water	Lot 8	SM/CC	SM
3/28/03	Drum	C6-IDW193-TA	DAC-P1	Ground Water	Lot 8	SM/CC	SM
3/28/03	Drum	C6-IDW194-TA	WCC-7S	Ground Water	Lot 8	SM/CC	SM